AMENDMENTS TO THE CLAIMS

Please add new claims 6-11 as follows:

1. (Original) A temperature detection circuit comprising:

an OP amp for receiving a band gap reference voltage and a first voltage;

a reference current generator for generating the first voltage and a reference voltage in response to an output signal of the OP amp;

a temperature detection voltage generator for generating a temperature detection voltage in response to an ambient temperature and the output signal of the OP amp; and

a comparator for comparing the reference voltage signal with the temperature detection voltage signal to generate a temperature control signal.

2. (Original) The temperature detection circuit of claim 1, further comprising a band gap reference voltage generator for generating the band gap reference voltage, the band gap reference voltage generator comprising:

a first reference current unit comprising a first PMOS transistor, a first resistor and a first PNP transistor, which are connected in cascade between a supply voltage and a ground voltage;

a second reference current unit comprising a second PMOS transistor, a second resistor, a third resistor and a second PNP transistor, which are connected in cascade between the supply voltage and the ground voltage; and

an OP amp comprising a first input terminal connected to a first node between the first resistor and the first PNP transistor, a second input terminal connected to a second node between the second resistor and the third resistor, and an output terminal connected to gates of first and

second PMOS transistors,

the first and second PNP transistors having bases connected to a bias voltage.

3. (Original) The temperature detection circuit of claim 1, wherein the reference current generator comprises:

a first PMOS transistor comprising a source connected to a power supply voltage and a gate connected to an output terminal of the OP amp; and

first to third resistors connected in series between the first PMOS transistor and the ground voltage, a voltage level between the first resistor and the second resistor being the first voltage.

4. (Original) The temperature detection circuit of claim 1, wherein the temperature detection voltage generator comprises:

a second PMOS transistor having a source connected to a supply voltage and a gate connected to an output terminal of the OP amp;

fourth and fifth resistors connected in series to a drain of the second PMOS transistor; and

a diode-connected PNP transistor provided between the fifth resistor and the ground voltage,

a voltage level between the fourth resistor and the fifth resistor being the temperature detection voltage.

5. (Original) The temperature detection circuit of claim 1, wherein the temperature detection circuit is manufactured through CMOS processes.

6. (New) A temperature detection circuit comprising:

amplifier means for receiving a band gap reference voltage and a first voltage;

reference current generator means for generating the first voltage and a reference voltage in response to an output signal of the amplifier means;

temperature detection means for generating a temperature detection voltage in response to a temperature of the temperature detection circuit and the output signal of the amplifier means; and

comparator means for comparing the reference voltage signal with the temperature detection voltage signal to generate a temperature control signal.

7. (New) The temperature detection circuit of claim 6, further comprising a band gap reference voltage generator means for generating the band gap reference voltage.

8. (New) The temperature detection circuit of claim 7, wherein the band gap reference voltage generator means comprises:

a first reference current unit comprising a first field effect transistor, a first resistor and a first bipolar transistor, which are connected in cascade between a supply voltage and a ground voltage;

a second reference current unit comprising a second field effect transistor, a second resistor, a third resistor and a second bipolar transistor, which are connected in cascade between

the supply voltage and the ground voltage; and

an operational amplifier comprising a first input terminal connected to a first node between the first resistor and the first bipolar transistor, a second input terminal connected to a second node between the second resistor and the third resistor, and an output terminal connected to gates of first and second field effect transistors,

the first and second bipolar transistors having bases connected to a bias voltage.

9. (New) The temperature detection circuit of claim 6, wherein the reference current generator means comprises:

a first field effect transistor comprising a source connected to a power supply voltage and a gate connected to an output terminal of the amplifier means; and

first through third resistors connected in series between the first field effect transistor and the ground voltage, a voltage level between the first resistor and the second resistor being the first voltage.

10. (New) The temperature detection circuit of claim 6, wherein the temperature detection voltage generator means comprises:

a second field effect transistor having a source connected to a supply voltage and a gate connected to an output terminal of the operational amplifier;

fourth and fifth resistors connected in series to a drain of the second field effect transistor; and

a diode-connected bipolar transistor provided between the fifth resistor and the ground voltage,

a voltage level between the fourth resistor and the fifth resistor being the temperature detection voltage.

11. (New) The temperature detection circuit of claim 6, wherein the temperature detection circuit is manufactured through CMOS processes.